UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER-SUPPLY PAPER 1000 PLATE 1

GEOLOGIC MAP OF THE SANTA MARIA VALLEY AREA, SANTA BARBARA COUNTY, CALIFORNIA

EXPLANATION

QUATERNARY

Recent

Qs — Dune sand
Unconsolidated sand, in part actively drifting; locally yields water to wells in small quantity

UNCONFORMITY

Qrc — River-channel deposits
Unconsolidated coarse gravel, sand, and silt in major river channels; highly permeable, largely unsaturated, but transmits large seepage losses from rivers to main water body

UNCONFORMITY

Qal — Alluvium
Unconsolidated coarse gravel, sand, silt, and clay; upper member is fine-grained near coast and confines main water body; lower member everywhere highly permeable and yields water copiously to wells

Pleistocene

UNCONFORMITY

Qt — Terrace deposits
Unconsolidated coarse gravel, sand, silt, and clay of fluvial origin; mostly unsaturated but locally yields water to wells; fairly permeable

UNCONFORMITY

Qo — Orcutt formation
Unconsolidated gravel, sand, and clay; locally divisible into two members—the lower coarse-grained and the upper fine-grained; permeability decreases toward the coast

TERTIARY

Pliocene (upper)

UNCONFORMITY

Tpr — Paso Robles formation
Unconsolidated gravel, sand, silt, and clay with few limestone beds near base; yields water fairly freely to wells; permeability decreases from north to south and from east to west

LOCAL UNCONFORMITY

Tc — Careaga sand
Unconsolidated massive marine sand with some silt and gravel; locally fossiliferous; fairly low permeability, and not tapped by wells

LOCAL UNCONFORMITY

Miocene

Tu — Consolidated Tertiary rocks undifferentiated
Consolidated shale, sandstone, siltstone, and mudstone; some interbedded pyroclastic and basic intrusive rocks; essentially non-water-yielding; includes Fozen mudstone, Sisquoc formation, and Monterey shale

MAJOR UNCONFORMITY

JURASSIC (?)

Jfk — Franciscan and Knoxville (?) formations
Consolidated igneous and metamorphic rocks of serpentine, chert, and glaucophane schist, closely associated with green sandstone and green to black shale; essentially non-water-yielding

U / D — Fault, dashed where approximately located, dotted where concealed
U, upthrown side; D, downthrown side

Doubtful fault, dotted where concealed

Axis of anticline and direction of plunge
Dashed lines indicate doubtful position

Axis of syncline and direction of plunge
Dashed lines indicate doubtful position

Strike and dip of beds

Approximate dip of beds, strike undetermined

Nonflowing well

Intermittently flowing well, 1942–45

Abandoned well

Irrigation well

Numbers indicate location, as explained in text

Base from map by Santa Maria Valley Water Conservation District and from U. S. Geological Survey topographic maps. Compiled in 1944. Broken land lines projected, for reference only

Base by G. F. Worts, Jr. Geology by G. F. Worts, Jr., in large part after Woodring and others. Surveyed in 1941–45

1 0 5 Miles